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This is the author's version of a work that was submitted/accepted for publication in the following source:

Hine, Julian, [Kamruzzaman, Md.](#), & Banerjee, Urbi  
(2015)

Changing travel patterns and journeys to health services in Great Britain 1985-2012: An examination health service utilisation using the National Travel Survey. In  
*Changing Perspectives: 1st International Conference on Transport and Health (ICTH 2015)*, 6 - 8 July 2015, UCL Campus, London.

This file was downloaded from: <http://eprints.qut.edu.au/88941/>

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<http://doi.org/10.1016/j.jth.2015.04.562>

# Changing travel patterns and journeys to health services in Great Britain 1985-2012: an examination health service utilisation using the National Travel Survey

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## Abstract

*Background:* This paper examines changing patterns in the utilisation and geographic access to health services in Great Britain using National Travel Survey data (1985-2012). The National Travel Survey (NTS) is a series of household surveys designed to provide data on personal travel and monitor changes in travel behaviour over time. The utilisation rate was derived using the proportion of journeys made to access health services. Geographic access was analysed by separating the concept into its accessibility and mobility dimensions.

*Methods:* Variables from the PSU, households, and individuals datasets were used as explanatory variables. Whereas, variables extracted from the journeys dataset were used as dependent variables to identify patterns of utilisation i.e. the proportion of journeys made by different groups to access health facilities in a particular journey distance or time band or by mode of transport; and geographic access to health services. A binary logistic regression analysis was conducted to identify the utilisation rate over the different time periods between different groups. This analysis shows the Odds Ratios (ORs) for different groups making a trip to utilise health services compared to their respective counterparts. Linear multiple regression analyses were conducted to then identify patterns of change in the accessibility and mobility level.

*Results:* Analysis of the data has shown that that journey distances to health facilities were significantly shorter and also gradually reduced over the period in question for Londoners, females, those without a car or on low incomes, and older people. Although rates of utilisation of health services were significantly lower because of longer journey times. These findings indicate that the rate of utilisation of health services largely depends on mobility level although previous research studies have traditionally overlooked the mobility dimension.

*Conclusions:* This finding, therefore, suggests the need to improve geographic access to services together with an enhanced mobility option for disadvantaged groups in order for them to have improved levels of access to health facilities. This research has also found that the volume of car trips to health services also increased steadily over the period 1985-2012 while all other modes accounted for a smaller number of trips. However, it is difficult to conclude from this research whether this increase in the volume of car trips was due to a lack of alternative transport or due to an increase in the level of car-ownership.